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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/887,194	06/22/2001	Kimberly F. Glassman	BB1449 US NA	9205

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EXAMINER	
LACOURCIERE, KAREN A	
ART UNIT	**PAPER NUMBER**
1635	6

DATE MAILED: 10/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/887,194	Applicant(s) GLASSMAN ET AL.	
	Examiner Karen Lacourciere	Art Unit 1635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-45 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) 1-45 are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

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DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1, 2, 6-12, 16-19 and 45, drawn to a recombinant construct which expresses an RNA comprising an RNA with a region unrelated to any endogenous RNA in the host located 5' to a region with homology to a target mRNA and the reverse complement of the unrelated RNA 3' to the homologous RNA, classified in class 536, subclass 24.5.

II. Claims 1, 3, 6-11, 13, 16-19 and 45, drawn to a recombinant construct which expresses an RNA comprising two complementary RNA regions unrelated to any endogenous RNA in the host located 5' to a region with homology to a target mRNA in the host, classified in class 536, subclass 24.5.

III. Claims 1, 4, 6-11, 14, 16-19 and 45, drawn to a recombinant construct which expresses an RNA comprising two complementary RNA regions unrelated to any endogenous RNA in the host located 3' to a region with homology to a target mRNA in the host, classified in class 536, subclass 24.5.

IV. Claims 1, 5, 6-11, 15-19 and 45, drawn to a recombinant construct which expresses an RNA comprising two complementary RNA regions unrelated to any endogenous RNA in the host located within a region with homology to a target mRNA in the host, classified in class 536, subclass 24.5.

V. Claims 21, 22, 26-32 and 36-40, drawn to a recombinant construct which expresses an RNA comprising an RNA with a region encoded by any nucleic acid sequence in the genome of host cell other than the target RNA in the host located 5' to a region with homology to a target mRNA and the reverse complement of the encoded RNA 3' to the homologous RNA, classified in class 536, subclass 24.5.

VI. Claims 21, 23, 26-31, 33 and 36-40, drawn to a recombinant construct which expresses an RNA comprising an two complementary RNA regions encoded by any nucleic acid sequence in the genome of a host cell other than the target RNA located 5' to a region with homology to a target mRNA, classified in class 536, subclass 24.5.

VII. Claims 21, 24, 26-31, 34 and 36-40, drawn to a recombinant construct which expresses an RNA comprising an two complementary RNA regions encoded by any nucleic acid sequence in the genome of a host cell other than the target RNA located 3' to a region with homology to a target mRNA, classified in class 536, subclass 24.5.

VIII. Claims 21, 25-31 and 35-40, drawn to a recombinant construct which expresses an RNA comprising an two complementary RNA regions encoded by any nucleic acid sequence in the genome of a host cell other than the target RNA located within a region with homology to a target mRNA, classified in class 536, subclass 24.5.

IX. Claims 41-44, drawn to a method of identifying or screening for an essential plant gene, classified in class 435, subclass 6.

Applicant should note, there are claims which are generic to more than one Group. Upon election of one invention, generic claims will only be examined to the extent that they read on the elected invention.

Each of the inventions of Groups I and II and III and IV are unrelated to the inventions claimed in Groups V and VI and VII and VIII. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are drawn to compositions which are not disclosed as used together and have different and distinct functions and, therefore, have different modes of operation. For example, each of the inventions of Groups I and II and III and IV operate through an RNA which comprises a double stranded RNA region wherein the double stranded region is unrelated to any nucleic acid comprised within the host cell, whereas the inventions of Groups V and VI and VII and VIII operated through an RNA which comprises an RNA which comprises a double stranded region encoded by a nucleic acid within the genome of the host cell. Given these differences, it would require an entirely different search for each of Groups I and II and III and IV, than for each of Groups V and VI and VII and VIII.

Each of the inventions of Groups I and II and III and IV are unrelated to each other. Inventions are unrelated if it can be shown that they are not disclosed as capable

of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are drawn to compositions which are not disclosed as used together and have different and distinct functions and, therefore, have different modes of operation. For example, the inventions of Groups I and II and III and IV each operate through a structurally distinct RNA, each Group comprises a double stranded region in a distinct conformation, the Invention of Group I comprises a double stranded region wherein the complementary regions are separated by a sequence with homology to the target RNA, whereas Group II has a double stranded region which is entirely 5' to a sequence with homology to a target RNA, whereas Group III has a double stranded region which is entirely 3' to a sequence with homology to a target RNA and Group IV has a double stranded region which is within the target RNA sequence. Given these differences, it would require an entirely different search for each of Groups I and II and III and IV.

Each of the inventions of Groups V and VI and VII and VIII are unrelated to each other. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are drawn to compositions which are not disclosed as used together and have different and distinct functions and, therefore, have different modes of operation. For example, the inventions of Groups V and VI and VII and VIII each operate through a structurally distinct RNA, each Group comprises a double stranded region in a distinct conformation, the Invention of Group V comprises a double stranded region wherein the

complementary regions are separated by a sequence with homology to the target RNA, whereas Group VI has a double stranded region which is entirely 5' to a sequence with homology to a target RNA, whereas Group VII has a double stranded region which is entirely 3' to a sequence with homology to a target RNA and Group VIII has a double stranded region which is within the target RNA sequence. Given these differences, it would require an entirely different search for each of Groups V and VI and VII and VIII.

Each of the inventions of Groups I and II and III and IV and V and VI and VII and VIII are related to Group IX as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the products of each of Groups I and II and III and IV and V and VI and VII and VIII can be used in a materially different method than the method of screening an essential plant gene of Group IX. For example, each of the products of Groups I and II and III and IV and V and VI and VII and VIII can be used in a method of down regulating the expression of a target gene in a cell in culture, which is materially different than the method of Group IX.

Sequence election applicable to Groups I-IV

Pursuant to 35 U.S.C. 121 and 37 C.F.R. 1.141, the sequences listed in claim 45 are subject to restriction. The Commissioner has partially waived the requirements of 37 C.F.R. 1.141 and will permit a reasonable number of such nucleotide sequences to

be claimed in a single application. Under this policy, up to 10 of independent and distinct nucleotide sequences will be examined in a single application. (see MPEP 803.04 and 2434)

Claim 45 specifically claims RNA regions comprised within SEQ ID NOS 12, 13 or 34. These sequences are considered to be unrelated, since each sequence claimed is structurally and functionally independent and distinct for the following reasons: each sequence has a unique nucleotide sequence and has a different effect on the target gene when incorporated into the RNA molecule claimed. Furthermore, a search of more than one (1) of the sequences claimed in claim 45 presents an undue burden on the Patent and Trademark Office due to the complex nature of the search and corresponding examination of more than one (1) of the claimed sequences. In view of the foregoing, one (1) sequence is considered to be a reasonable number of sequences for examination. Accordingly, applicants are required to elect one (1) antisense sequence from claim 45, if Applicant elects any of Groups I-IV, which are drawn to RNA sequences comprised within each of SEQ ID NO: 12, 13 and 34.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen A. Lacourciere whose telephone number is (703) 308-7523. The examiner can normally be reached on Monday-Friday 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John LeGuyader can be reached on (703) 308-0447. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 305-1935 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

KAREN LACOURCIERE
PATENT EXAMINER

Karen A. Lacourciere
September 30, 2002